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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,464	04/30/2001	Kyung-Sik Kim	300055.489	4617

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EXAMINER

HOM, SHICK C

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/846,464

Applicant(s)

KIM ET AL.

Examiner

Shick C. Hom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/11/07 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 2 line 3 which recite "the case" lacks clear antecedent basis because no case have been previously recited in the claims and therefore the limitation is not clearly understood. Claims 3-4 are rejected under 35 U.S.C. 112, second paragraph because they depend from rejected claim 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

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U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over what is disclosed as prior art in pages 1-2 of the specification in view of La Porta et al. (2002/0057657).

Regarding claims 1, 8-9:

The self-disclosed prior art in pages 1 and 2 of the specification disclose a hard handoff method for making a mobile client continuously receive internet services by carrying out a hard handoff procedure with a target radio network upon encountering a hard handoff situation in the mobile client, comprising the steps of:

carrying out a radio connection between the mobile client and a target radio network when a handoff is requested (see the specification page 1 lines 10-13);

establishing a Point-to-Point Protocol (PPP) link between the mobile client and a target packet data service node of the target radio network (see the specification page 2 lines 1-5);

carrying out a mobile IP registration procedure of the mobile client to the target packet data service node after the PPP link is completed, comprising transmitting an agent

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advertisement message to the mobile client, and the mobile client transmitting an agent solicitation to the target packet data service node, and shifting a traffic channel of the mobile client to the target packet data service node from the current packet data service node after setting all links (see the specification page 2 lines 6-9) as in claims 1, 8; and the initial step of sending a handoff request from a current radio network to a target radio network, and sending a handoff reply from the target radio network to the current radio network (see Fig. 1 (S2) whereby the current radio network, RN^* , sends a handoff request to a target radio network, RN_t , and sending a handoff reply (S3) from the target radio network, RN_t , to the current radio network, RN^*) as in claim 9.

Regarding claims 5, 8:

The self-disclosed prior art discloses wherein carrying out the mobile IP registration procedure further comprises transmitting a registration request to an Authentication, Authorization and Accounting (AAA) server and receiving a mobile IP registration reply from the AAA server (see the specification page 2 lines 10-11).

Regarding claims 6-8:

The self-disclosed prior art discloses wherein the registration request is transmitted by the target packet data

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service node and the reply is received at the target packet data service node as in claims 6, 8, and wherein the target packet data service node transmits confirmation of the mobile IP registration reply to the mobile client as in claims 7-8 (see the specification page 2 lines 11-15).

The self-disclosed prior art discloses all the subject matter of the claimed invention with the exception of whereby the step of establishing a Point-to-Point Protocol (PPP) link between the mobile client and a target packet data service node of the target radio network being established without closing a current traffic link; and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed as in claims 1, 8; and wherein the mobile client carries out a setting of independent multiple PPP links and their control functions, wherein the setting of the multiple PPP links is carried out in both the case when a frequency used in the target radio network and a frequency used in a currently serving radio network are the same and when they are not the same as in claims 2-4, 10-11.

La Porta et al. from the same or similar fields of endeavor teach that it is known to provide the step of establishing a Point-to-Point Protocol (PPP) link between the mobile client and

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a target packet data service node of the target radio network being established without closing a current traffic link; and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed (paragraph 0118 recite the concept of soft-handoff whereby the mobile device tune to the old and new base station concurrently and ensuring that packets forwarded to the old base station at the same time an old link is being torn down will be forwarded to the new base station clearly reads on the not closing the current traffic link until after the mobile IP registration to the target packet data service node is completed as in claims 1, 8); and wherein the mobile client carries out a setting of independent multiple PPP links and their control functions, wherein the setting of the multiple PPP links is carried out in both the case when a frequency used in the target radio network and a frequency used in a currently serving radio network are the same and when they are not the same (paragraph 0123 recite a mobile device being handed off to a new base station in a cellular network clearly anticipate the case when a frequency used in the target radio network and a frequency used in a currently serving radio network are not the same; the frequency would be the same when the mobile client is handed off to a new cell control by the

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same base station in the cellular network as in claims 2, 3, 4, 10-11).

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to establish a Point-to-Point Protocol (PPP) link between the mobile client and a target packet data service node of the target radio network being established without closing a current traffic link; and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed; and wherein the mobile client carries out a setting of independent multiple PPP links and their control functions, wherein the setting of the multiple PPP links is carried out in both the case when a frequency used in the target radio network and a frequency used in a currently serving radio network are the same and when they are not the same as taught by La Porta et al. in the handoff method of the self-disclosed prior art.

The step of establishing a Point-to-Point Protocol (PPP) link between the mobile client and a target packet data service node of the target radio network being established without closing a current traffic link; and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is

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completed; and wherein the mobile client carries out a setting of independent multiple PPP links and their control functions, wherein the setting of the multiple PPP links is carried out in both the case when a frequency used in the target radio network and a frequency used in a currently serving radio network are the same and when they are not the same can be implemented by waiting and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed in the cellular network of La Porta et al. in the handoff method of the self-disclosed prior art.

The motivation for waiting and closing the channel of the mobile client to a current packet data service node after the mobile IP registration to the target packet data service node is completed in the cellular network as taught by La Porta et al. in the handoff method of the self-disclosed prior art being that it provides more efficiency for the system since the mobile client can continuously receive internet services during handoff between base stations.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Chang discloses a method for providing concurrent service in a mobile communication system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pham Chi can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CHI PHAM
SUPERVISORY PATENT EXAMINER

6/29/08